REMARKS

The applicant thanks Examiner Duffy and Examiner Coburn for the telephone interview held on October 6, 2009. During the interview, the claims and the references Choy, Sandvick, and Yee were discussed. Claims 1-25 have been amended, with claims 1, 14, and 24 being independent. Favorable reconsideration and reexamination are respectfully requested.

Double patenting

Claims 1-25 were provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-21 of copending Application No. 10/734616, claims 1-20 of copending Application No. 10/734617, claims 1-26 of copending Application No. 10/734618, and claims 1-20 of copending Application No. 10/735294. The examiner stated:

> **Although the conflicting claims are not identical, they are not patentably distinct from each other because the claims are directed to substantially similar subject matter of a remote sensing body and goggles for viewing the remote images.**

The applicant disagrees. However, the applicant requests that the examiner hold the rejection in abeyance until the other rejections are resolved. The applicant may consider filing a terminal disclaimer when the claims are allowed.

35 U.S.C. §112 rejection

Claim 25 was rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The applicant has amended the claim.

35 U.S.C. §103(a) rejections

Claims 1, 12, 14 and 18-23 were rejected under 35 U.S.C. 103(a) as being unpatentable over Choy et al. (US 6695770) in view of Sandvick, Warren J. et al. (US 6368268 B1) and Yee et al. (US 6016385).

Claim 1 is allowable over the alleged combination of references at least because the alleged combination neither describes nor suggests: "a first camera supported by the first mannequin, … a first processor receiving in real time the first image of the scene from the first camera … the first processor overlaying a virtual environment over one or more portions of the received real-time first image … with the image of the virtual scene including at least one remaining portion of the real-time first image… ."

Regarding claim 1, the examiner stated (emphasis added):

> **..., Choy discloses a virtual reality encounter system comprising: a mannequin coupled to a computer system wherein the mannequin is fitted with appropriate sensors that are connected to the computer system to transmit to another location and user device over a network (3:23-25), a headset, to display morphing animations and animated textures on the appropriate avatar (1 :63 and 965- 10:6) and a processor that overlays a virtual environment over one or more portions of a video image to form a virtual scene (8:47-58 and 965-1 0:6). *Choy lacks explicitly stating the use of a camera for each user*.**
>
> **..., Sandvick teaches that users engaging in remote sexual relations may use cameras and microphones to interact with each other (3:10-26). One of ordinary skill in the art would readily recognize that *persons engaging in sexual relations would likely enjoy being able to see and hear each other*.**
>
> **Therefore it would have been obvious ...**

The applicant disagrees that Choy and Sandvick can be combined and that "persons engaging in sexual relations [in Choy] would likely enjoy being able to see and hear each other", because *Choy teaches away from users "see[ing] each other"*, and therefore, the use of a camera.

Choy provides a user with a headset that displays to the user an avatar represented by a polygon mesh in a virtual environment (column 11, lines 12-17). The avatar is a computer-based person with an image of a film star (column 2, lines 9-10 and column 42-44). According to Choy, creating the avatar and the virtual environment provides advantages. For example, "the user will be able to select with whom they wish to interact with (a film star for instance)" (column 2, lines 8-9), or "[T]he use of computer generated imaginary in virtual reality means that both the avatars, and the environments they are both to be experienced within, can be many and varied" (column 11, lines 18-20). In other words, Choy *intends to* provide virtual images in virtual environments to the user and *intends to* have the users not see each other. Through the

headset, the user of Choy's system could *only possibly either* see the avatar in the virtual environment *or* see another real user in real environment, but not both. Modifications of Choy's system to enable the users to see each other, but not the avatar in the virtual environment, destroys the intention of Choy's system. One skilled in the art would not have combined Choy and Sandvick for the reasons stated by the examiner.

Incorporation of a camera would be useless in Choy's system. Choy tracks movement of the users using sensors and apply the movement to the corresponding avatar (column 9, lines 42-50, and column 4, 47-50). The tracking cannot be done using cameras because the movement of all limbs of the users need to be tracked in 6 degrees of freedom in detail so that the avatar can move accordingly based on the tracking data (column 5, lines 47-48 and 56-58). The examiner also stated (emphasis added):

> **..., applicant states that Choy is silent as to the use of a camera for capturing an image. As Choy explicitly states it is able to use photographs and video recordings, it is inherent that a camera has been used in the process. *There is no other way to create photographs or video recordings than with a camera*. There is nothing in Choy that precludes or teaches against using a remote camera for the images and as examiner has previously contested, *persons engaging in sexual relations would reasonably be expected to want to see each other*.**

Although Choy used photographic or video recording to provide a database of images for use in the virtual environment, the so-created images are neither captured by "a first camera supported by the first mannequin", nor received by a processor in real time, let alone sent "... at least one remaining portion of the real-time first image *in real time to a communication network*". The images in Choy's database are meshed into a database of standard human movement (column 8, lines 40-44), and user can select from the images one that the user wishes to see (column 10, lines 64-67 and column 11, lines 23-25). The examiner further stated:

> ***The combination [of Choy and Sandvick]made does not explicitly disclose that the camera would be supported by mannequin*.**
>
> **..., Yee discloses a robot system wherein an operator controls the robot and receives sensory information from the robot, including a pair of cameras corresponding to the remote user's eyes coupled to the robot for receiving a video image where the cameras send the video images via a communication network to the user (5:11-37). One skilled in the art would recognize the *advantages of providing video signals that accurately recreate the human audio visual reception to a remote user in order to provide a visual connection for the users in a position that most accurately recreates normal human perception*.**

Therefore it would have been obvious to one skilled in the art at the time to combine the camera configuration of Yee with the two person configuration of Choy *to provide a more realistic experience to both remote users in a networked environment*.

Yee describes an operator controlling a robot by viewing through a display that shows the environment of the robot captured by cameras attached to the robot (FIGS. 2 and 3, and column 5, lines 11-14). Yee's cameras are useless in Choy's system, because Choy's system does not need cameras. Placing cameras on Choy's dolls are useless in Choy's system.

Accordingly, one skilled in the art would not have combined Choy with Sandvick or Yee. Further, even if the three references were combined, the result would not have been features recited in amended claim 1. None of the references, alone or in combination, describes or would have made obvious "a first processor receiving *in real time* the first image of the scene from the first *camera supported by the mannequin*, the first processor *overlaying* a virtual environment over one or more portions of the received real-time first image to form an a first image of a virtual scene with *the image of the virtual scene including at least one remaining portion of the real-time first image*, and ...; and a first set of goggles to render *a second image of a virtual scene* from signals received from the communication network," as recited in claim 1.

During the interview, the examiner stated that Yee alone may make obvious features of claim 1. The applicant disagrees. Yee at least does not describe "overlaying a virtual environment over one or more portions of the received real-time first image to form an a first image of a virtual scene," as recited by claim 1. One skilled in the art would not have modified Yee to form an image of a virtual scene because Yee's system would not work if the operator of the robot cannot see the real scene of the environment of the robot.

Independent claim 14, as amended, is also patentable over Choy, Sandvick, and Yee, for at least reasons similar to those discussed for claim 1.

All dependent claim are patentable for at least the reasons discussed for respective independent claims.

Claims 2-11, 13 and 15-17 rejected under 35 U.S.C. 103(a) as being unpatentable over Choy in view of Sandvick and Yee as applied to claim 1 above, and further in view of Dundon (US 7046151).

These dependent claims are patentable over Choy, Sandvick, and Yee for at least the reasons discussed for the respective independent claims. Dundon does not cure the deficiencies of Choy, Sandvick, and Yee, and accordingly, claims 2-11, 13, and 15-17 are patentable.

> **Claims 24-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Choy et al. (US 6695770) in view of Sandvick; Warren J. et al. (US 6368268 Bl), Yee et al. (US 601 6385) and Dundon (US 7046151).**
>
> **In regard to claim 24, Choy discloses a mannequin coupled to a computer system wherein the mannequin is fitted with appropriate sensors that are connected to the computer system to transmit to another location and user device over a network (3:23-25) and a body suit with motion sensors and gloves with vibrotactile stimulators, or actuators, receiving data from the system (5:1-6:67), motion sensors positioned throughout the body suit sending motion signals corresponding to movements to a communications network (5:46-67), and a set of goggles for displaying images from the system (3:41-4:55). Choy does not explicitly disclose a first and second camera on a first and second mannequin.**
>
> **..., Sandvick teaches that ....**
>
> **Yee discloses ....**
>
> **Therefore it would have been obvious to ... to combine the camera configuration of Yee with the two person configuration of Choy to provide a more realistic experience to both remote users in a networked environment. The combination made does not explicitly disclose motion actuators disposed over the body suit.**

The applicant disagrees. For at least the reasons discussed previously with regard to claim 1, one skilled in the art would not have combined Choy, Sandvick, and Yee to provide "a first camera supported by the first mannequin" and "a second camera supported by the second mannequin", as recited by claim 24.

> **..., Dundon discloses an interactive body suit that permits users to interact over a network whereby the garment includes tactile actuators, the tactile actuators receiving tactile signals from the network (abstract). One skilled in the art would recognize the advantages of recreating tactile feelings over the entire body when participating in virtual congress.**
>
> **Therefore it would have been obvious to ... combine the body suit of Dundon with the system of Choy because, as Dundon suggests (2936-55), an interactive body suit that covers a user with embedded oscillating motors provides a more realistic and interactive sensory environment when providing force feedback sense of touch and would further the stated goal of Choy (6:65-67) to enable the users to feel the virtual partners.**

Dundon does not remedy the deficiencies of Choy, Sanvick, and Yee described above. Claim 24 is patentable over Choy, Sanvick, Yee, and Dundon. Dependent claim 25 is patentable for at least the reasons discussed for claim 24.

All of the dependent claims are patentable for at least similar reasons as those for the claims on which they depend are patentable.

Canceled claims, if any, have been canceled without prejudice or disclaimer.

Any circumstance in which the applicant has (a) addressed certain comments of the examiner does not mean that the applicant concedes other comments of the examiner, (b) made arguments for the patentability of some claims does not mean that there are not other good reasons for patentability of those claims and other claims, or (c) amended or canceled a claim does not mean that the applicant concedes any of the examiner's positions with respect to that claim or other claims.

The **$65** fee is being paid concurrently on the electronic filing system by way of deposit account authorization. Please apply any other charges or credits to deposit account 06-1050.

Respectfully submitted,

Date: October 13, 2009

/Denis G. Maloney/
Denis G. Maloney
Reg. No. 29,670

Fish & Richardson P.C.
225 Franklin Street
Boston, MA 02110
Telephone: (617) 542-5070
Facsimile: (877) 769-7945